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at Doitiin tsagaan and Duruu Lakes. These viruses were classified into the clade 2.3.2. The IVPI was high /2.97-3.00/. Also we isolated 21 LPAIVs in 2007 and 2008. The subtypes were H3N8(11), H4N6(4), H7N7, H7N9, H3N1, H3N2, H4N2 and H10N6. The viruses were related with the Euro-Asia lineage. In 2009, 7 LPAIVs were isolated from wild birds (*whooper-swan, ruddy-shelduck, Mongoliangull, mallard and gadwall*) in Central and Eastern Provinces. The subtypes were H3N8(3), H10N6(3) and H4N6.

Conclusion: We isolated 4 HPAIVs and 28 LPAIVs from wild birds in Mongolia genetically related to the Euro-Asian AIVs. All HPAI outbreaks were restricted to the wild birds in north-central Mongolia. The phylogenetic differences of the H5N1 isolates from 2005, 2006 and 2009 indicate that the role of the migratory birds in Mongolia in the AIV mutation should be clarified. Therefore, it is necessary to continue the research on avian influenza in Mongolia.

doi:10.1016/j.ijid.2010.02.1846

34.025

Virological studies on migratory penguins captured in Brazilian southeast coast

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Background: The migratory birds represent the main vector of Orthomixovirus and Paramyxovirus in nature, spread among birds in temperate regions. They have been reported circulating among Antarctic penguins through serological surveys, especially in Adelie penguins (Pysoscelis adeliae) of eastern Antarctica. The Magellanic penguins (Spheniscus magellanicus) are distributed on the southern shores of South America. Their breeding colonies were distributed from the coast of Chile to the Peninsula Valdez in Argentina, on the southern tip of South America. This penguin performs migration to the north, and such shift is an annual event considered characteristic of the species. The birds breed in colonies north of its distribution, as in the southern coast of Brazil, where they stay in the winter. Some individuals have demonstrated irregular movements that may occur with or in large numbers, causing errant individuals. It is believed that for this reason this species have reached the Northeast of Brazil in 2008 and made an unusual situation.

Methods: We analyzed the presence of Orthomixovirus and Paramyxoviruses in penguins captured on the coast of the Espírito Santo state, Brazil, due to the increasing number of species in the region in 2008. Were inoculated into the allantoic cavity embryonated fowl eggs suspensions of 73 cloacal swabs taken from live migratory penguins at Brazilian Southeast Coast, between September - October 2008. The allantoic fluids were tested for haemagglutination activity (HA). In samples with positive HA, we performed hemagglutination inhibition (HI) test against antibodies to characterized the isolates. Were perfomed a RT-PCR to protein M of Influenzavirus and L protein of broadly range of Paramyxovirus.

Sample	FMP(ua)	FMi (ua)	*TI*
NDV(+)	16394.46	444.89	41,34
56	23659,12	1273.81	18,57
60	25118,95	1893,23	13,26
64	25248.39	1343.51	18,79
66	25018,11	610.98	40,94
87	26148.81	2500	10,45
119	23635.86	1494,16	15,B1
129	26903.40	1890	14,23
439	25262.89	818.95	30,84

NA activity and inhibition by DANA of penguins isolates.

Results: Our results shown that 9 samples (12%), were positive by haemaglutination test, but no inhibition by influenza sera observed. Partial inhibition by NDV serum was observed in all samples. All samples presents NA activity. All samples amplified L protein gene of Paramyxovus (Avulavirus), demonstrating a strong band of 500 bp on agarose gel.

Conclusion: Our results shown that Avulavirus is present on these birds and may cause diseases on this species, contributing to clinical deterioration of the animals.

doi:10.1016/j.ijid.2010.02.1847

34.026

Poultry farmers' response to AI outbreak and its control in Indonesia

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Background: AI outbreak in Indonesia had started since August 2003 up to now. GOI continuously try to control it by introducing 9 strategies on bio-security policies, for instance, vaccination, depopulation, transportation and trading of poultry products. Poultry industry development provides employment for villagers and it is very important for low income villagers, in particular poultry rearers in sector IV.

Methods: In order to observe socio economic impacts of AI outbreak in sector IV, survey had been implemented in three provinces in Indonesia in early 2008.

Results: Results indicated that in general farmers did not know the 13 symptoms as overall AI symptoms. Overall only 2.6 percent of the respondents knew all of the AI symptoms. This knowledge was very low and, therefore, they could not deal with AI outbreak properly. Overall, only 25.1 percent of the respondents knew all of the seven items relating with control measures as (i) stamping out, (ii) vaccination, (iii) spraying disinfectant (iv) isolation, (v)) burning, (vi) compensation and (vii) provide antibiotic, while the rests knew only some of the items. The higher the disease attack the smaller the percentage of the respondents knew all items of AI outbreak prevention. Most farmers conducted vaccination (65.3 percent). Only few smallholders in West Java applied

vaccination (27.1 percent). Almost all farmers said that all of the methods of controlling AI outbreak did not give economic benefit. Survey also revealed that location of poultry enterprise is always sticking to and extend according to the pattern of residential areas.

Conclusion: In densely populated Java, it is almost impossible to differentiate between areas to rear poultry and residential areas. In one hand, such situation hardly can be excused considering environmental aspects for instance, but on the other hand, poultry in sector IV also need to be developed to provide employment for villagers.

doi:10.1016/j.ijid.2010.02.1848

34.027

Cluster of MRSA in cats and staff of a veterinary clinic: Follow-up and possible implications for control

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Background: At approximately 1% the prevalence of Methicillin-Resistant *Staphylococcus aureus* (MRSA) in the Netherlands is among the lowest in Europe. Voluntary notification of a veterinarian of 4 successive but unrelated cats with postoperative wound infections with an identical, human MRSA strain prompted this investigation. The prevalence rate of human MRSA carriage in all veterinary staffmembers was measured, and subsequently we wanted to prevent MRSA infections in cats and MRSA carriage in this clinic.

Methods: After informed consent all 44 veterinary staffmembers were questioned for MRSA risk factors. Cat case histories were reviewed (Result A). Hygienic procedures were updated (Result B). Staffmembers were screened for MRSA, and positives were treated. Posttreatment cultures were all sampled every 2 weeks during 8 weeks (Result C). A selective broth was used for 24 hours, after which the IDI test was performed. Each positive sample was subcultured on blood agar and an antibiogram was made using the Vitek-2 system (BioMerieux, Lyon, France) or E tests when appropriate. Each detected strain was sent to the national reference laboratory (RIVM) for pulse field gel electrophoresis (PFGE) typing. MRSA carriage was treated using local and systemic antibiotics.

Results: Result A: Professionals worked in individual (operation) rooms and had no catlle contact. No one had MRSA risk factors or MRSA infections. One positive professional had controlled skin eczema. The owner of the first cat and his family were MRSA negative. Result B: the updated hygienic protocol included improved hand hygiene, surface cleansing and more extensive use of gloves and masks. Result C: 7 persons (16%) were MRSA positive (nose, throat) with MRSA PGFE type 113 (national typing). Two of 7 professionals spontaneously turned negative. Four were treated successfully, but the last one surprisingly had a positive culture in the second round.She stayed negative thereafter. On 5 cultures additional spa and MLST typing of the strain was performed, matching the results of the four cats (spa type 739, ST 45 with clonal cluster 45).

Conclusion: A specific human MRSA cluster in humans and cats was found and successfully treated in humans. This may decrease future new infections in cats. Veterinary clinics should implement guidelines for dealing with MRSA, and be aware of increased risks for contracting MRSA.

doi:10.1016/j.ijid.2010.02.1849

34.028

An exploration of the knowledge, attitudes and perceptions of the local, adult, non-medically trained Grenadian population about certain zoonotic diseases

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Background: Zoonotic diseases represent a leading cause of illness and death from infectious diseases in humans. In the Caribbean generally and in Grenada specifically, to the best of our knowledge, no reports on examining people's knowledge, attitudes and perceptions towards zoonotic diseases have been published.The objective of this research study was to explore the knowledge, attitudes and perceptions of the local, adult, nonmedically trained Grenadian population about certain zoonotic diseases.

Methods: The study consisted of a quasi-experimental design consisting of 450 participants, selected using a convenience sampling in the Grand Anse and the Carenage areas of St. George's, Grenada. A questionnaire was employed to collect data on the knowledge, attitudes and perceptions towards five zoonotic diseases (Ringworm, Leptospirosis, Creeping Eruptions, Rabies and Salmonellosis).

Results: The overall level of distribution of Knowledge of zoonotic diseases was 38.6%. Knowledge of Ringworm (81.0%) was predominant among participants while Leptospirosis and Creeping Eruption demonstrated the greatest deficiency in participants' knowledge. Knowledge of zoonotic diseases was found to have an effect on the attitudes and perceptions of persons towards the diseases. Education ($p = 0.0000$) and income ($p = 0.0000$) were found to be determinants of zoonotic disease knowledge while age ($p = 0.56$) and gender ($p = 0.97$) had negligible influence on the measure of knowledge, attitudes and perceptions.

Conclusion: The overall level of distribution for correct knowledge towards zoonotic diseases was found to be less than 50% (38.59%) among the study participants. Education and income assumed the role as confounders which together act to determine participants' level of zoonotic disease knowledge. Age and gender was found to have no effect on either participants' attitudes towards pet care or their perceptions of zoonoses. Decisions on zoonotic safety involve consideration of a wide range of concerns to effectively address the public health concerns of such diseases. Scientific advice is relevant to inform effective and efficient interventions that are environmentally specific and culturally sensitive.

doi:10.1016/j.ijid.2010.02.1850